

Claims

- [c1] 1. A liquid crystal display panel having a display region and a non-display region, wherein the non-display region has a plurality of driver chip joining regions and a plurality of flexible printed circuit bonding regions, the liquid crystal display panel includes:
a plurality of groups of circuit lines connecting the driver chip joining regions and the flexible printed circuit bonding regions electrically together such that the ends of the groups of circuit lines connected to the driver chip joining region are input terminals and each group of circuit lines has a plurality of sub-lines for controlling the pixels of various colors, wherein the sub-lines of the group of circuit lines for controlling pixels of the same color are positioned in pairs adjacent to other pairs at the input terminal.
- [c2] 2. The liquid crystal display panel of claim 1, wherein the vertical length of the sub-lines in each group of circuit lines increases incrementally.
- [c3] 3. The liquid crystal display panel of claim 1, wherein the vertical length of the sub-lines in each group of circuit lines decreases incrementally.

- [c4] 4. The liquid crystal display panel of claim 1, wherein the panel further comprises a plurality of driver chips positioned inside the driver chip joining region for driving the liquid crystal layer over the display region.
- [c5] 5. The liquid crystal display panel of claim 4, wherein the driver chips comprises scanning chips, data chips, or scanning chips and data chips.
- [c6] 6. The liquid crystal display panel of claim 1, wherein the sub-lines are used for controlling a red, a green or a blue pixel.
- [c7] 7. A liquid crystal display panel, comprising:
a first array substrate, wherein the first array substrate has a display region and a non-display region, wherein the non-display region further comprising:
a plurality of driver chip joining regions;
a plurality of flexible printed circuit bonding regions;
and
a plurality of groups of circuit lines connecting various driver chip joining regions and flexible printed circuit bonding regions electrically together such that the ends of the groups of circuit lines connected to the driver chip joining region are input terminals and each group of circuit lines has a plurality of sub-lines for controlling the

pixels of various colors, wherein the sub-lines of the group of circuit lines for controlling pixels of the same color are positioned in pairs adjacent to other pairs at the input terminal;
a second array substrate positioned over the display region of the first array substrate; and
a liquid crystal layer sandwiched between the first array substrate and the second array substrate.

[c8] 8. The liquid crystal display panel of claim 7, wherein the vertical length of the sub-lines in each group of circuit lines increases incrementally.

[c9] 9. The liquid crystal display panel of claim 7, wherein the vertical length of the sub-lines in each group of circuit lines decreases incrementally.

[c10] 10. The liquid crystal display panel of claim 7, wherein the panel further comprises a plurality of driver chips positioned inside the driver chip joining region for driving the liquid crystal layer over the display region.

[c11] 11. The liquid crystal display panel of claim 10, wherein the driver chips comprises scanning chips, data chips, or scanning chips and data chips.

[c12] 12. The liquid crystal display panel of claim 7, wherein the first array substrate comprises an active device array

substrate.

- [c13] 13. The liquid crystal display panel of claim 12, wherein the active device array substrate comprises a thin film transistor array substrate.
- [c14] 14. The liquid crystal display panel of claim 7, wherein the first array substrate comprises a passive device array substrate.
- [c15] 15. The liquid crystal display panel of claim 7, wherein the second array substrate comprises a color-filtering plate.
- [c16] 16. The liquid crystal display panel of claim 7, wherein the sub-lines are used for controlling a red, a green or a blue pixel.